

IN THE CLAIMS:

Please amend claims 6, 14-21 and 27-39 and add claims 40-44 as follows.

1-5. (Cancelled)

6. (Currently Amended) A ~~time stamping method in a telecommunication system;~~ comprising:

receiving, in a base station, a time reference signal providing time reference in the telecommunication system;

generating an idle period in the transmission of a base station;

determining, in the base station, time characteristics of the idle period relative to the time reference by means of a power measurement; and

providing at least a portion of data to be transmitted from the base station with time characteristics proportional to the time reference by using time characteristics of the idle period.

7. (Original) The method of claim 6 further comprising positioning a mobile station by using time characteristics of the at least portion of data.

8. (Original) The method of claim 6 further comprising

emitting the idle period from an antenna unit of the base station; and

determining time characteristics of the idle period such that an uncertainty of a time interval between determining time characteristics of the idle period and emitting the idle period from the antenna unit of the base station is below a predefined value.

9. (Original) The method of claim 6 further comprising
emitting the idle period from an antenna unit of the base station; and
determining time characteristics of the idle period at a moment of emitting the idle period from the antenna unit of the base station.
10. (Original) The method of claim 6 further comprising
determining timing of a predefined portion of the idle period relative to the time reference by means of the power measurement; and
providing the at least a portion of data to be transmitted from the base station with time characteristics proportional to the time reference by using the timing of the predefined portion of the idle period.
11. (Original) The method of claim 6 further comprising
determining time characteristics of an idle period in a frame relative to the time reference;

providing the frame with the time characteristics proportional to the time reference by using time characteristics of the idle period in the frame.

12. (Original) The method of claim 6 further comprising
emitting the idle period from an antenna unit of the base station;
detecting, in a mobile station, the idle period emitted from the antenna of the base station;
determining the time of arrival of the idle period in the mobile station; and
positioning the mobile station by using the time of arrival of the idle period.

13. (Original) The method of claim 6 further comprising synchronizing the transmission of the base station by using the time characteristics of the idle period relative to the time reference.

14. (Currently Amended) A ~~telecommunication~~ system comprising:
a base station for providing radio transmission and reception for mobile stations;
wherein the base station comprises a time reference signal ~~receiving unit~~receiver
configured to receive~~for receiving~~ a time reference signal providing time reference in the telecommunication system;
wherein the base station comprises an idle period generator ~~for~~
generatingconfigured to generate an idle period in the transmission of the base station;

wherein the base station comprises a ~~detecting unit~~detector operationally connected to the idle period generator and the time reference signal ~~receiving unit~~receiver ~~for determining~~configured to determine time characteristics of the idle period relative to the time reference by means of a power measurement; and

a time stamping ~~unit~~stamper operationally connected to the ~~detecting unit~~detector configured to provide~~for providing~~ at least a portion of data to be transmitted from the base station with the time characteristics proportional to the time reference by using the time characteristics of the idle period.

15. (Currently Amended) The ~~telecommunication system~~ of claim 14 further comprising a ~~positioning unit~~positioner operationally connected to the base station configured to position~~for positioning~~ a mobile station by using time characteristics of the at least a portion of data.

16. (Currently Amended) The ~~telecommunication system~~ of claim 14, wherein the base station comprises an antenna ~~unit~~ operationally connected to the idle period generator configured to emit~~for emitting~~ the idle period; and

wherein the ~~detecting unit~~detector is configured to determine time characteristics of the idle period such that the uncertainty of the time interval between determining time characteristics of the idle period and emitting the idle period from the antenna ~~unit~~ of the base station is below a predetermined value.

17. (Currently Amended) The ~~telecommunication~~ system of claim 14, wherein the base station comprises an antenna ~~unit~~ operationally connected to the idle period generator configured to emit ~~for emitting~~ the idle period; and

the ~~detecting unit~~ detector is configured to determine time characteristics of the idle period at a moment of emitting the idle period.

18. (Currently Amended) The ~~telecommunication~~ system of claim 14, wherein the ~~detecting unit~~ detector is configured to determine timing of a predefined portion of the idle period relative to the time reference by ~~means of~~ the power measurement; and

wherein the time ~~stamping unit~~ stamper is configured to provide the at least a portion of data to be transmitted from the base station with time characteristics proportional to the time reference by using the timing of the predefined portion of the idle period.

19. (Currently Amended) The ~~telecommunication~~ system of claim 14, wherein the ~~detecting unit~~ detector is configured to determine the time characteristics of an idle period in a frame relative to time reference; and

wherein the time ~~stamping unit~~ stamper is configured to provide the frame with the time characteristics proportional to the time reference by using time characteristics the idle period in the frame.

20. (Currently Amended) The ~~telecommunication~~ system of claim 14, wherein the base station comprises an antenna ~~unit~~ operationally connected to the idle period generator configured to emit~~for emitting~~ the idle period;

the telecommunication system further comprising a mobile station configured to detect the idle period emitted from the antenna ~~unit~~ of the base station;

wherein the mobile station is configured to determine the time of arrival of the idle period; and

wherein the ~~positioning unit~~ positioner is configured to position the mobile station by using the time of arrival of the idle period.

21. (Currently Amended) The ~~telecommunication~~ system of claim 14, wherein the base station is configured to synchronize transmission of the base station by using time characteristics of the idle period relative to the time reference.

22-26. (Cancelled)

27. (Currently Amended) An apparatus~~time stamping mechanism in a telecommunication system~~, comprising:

receiving means for receiving, in a base station, a time reference signal providing time reference in the telecommunication system;

generating means for generating an idle period in the transmission of a base station;

determining means for determining, in the base station, time characteristics of the idle period relative to the time reference by means of a power measurement; and

providing means for providing at least a portion of data to be transmitted from the base station with time characteristics proportional to the time reference by using time characteristics of the idle period.

28. (Currently Amended) The apparatus~~time-stamping mechanism~~ of claim 27 further comprising positioning means for positioning a mobile station by using time characteristics of the at least portion of data.

29. (Currently Amended) The apparatus~~time-stamping mechanism~~ of claim 27 further comprising emitting means for emitting the idle period from an antenna ~~unit~~ of the base station; and

second determining means for determining time characteristics of the idle period such that an uncertainty of a time interval between determining time characteristics of the idle period and emitting the idle period from the antenna ~~unit~~ of the base station is below a predefined value.

30. (Currently Amended) The ~~time-stamping mechanism~~apparatus of claim 27 further comprising emitting means for emitting the idle period from an antenna ~~unit~~ of the base station; and

second determining means for determining time characteristics of the idle period at a moment of emitting the idle period from the antenna ~~unit~~ of the base station.

31. (Currently Amended) The ~~apparatus~~time-stamping mechanism of claim 27 further comprising second determining means for determining timing of a predefined portion of the idle period relative to the time reference by means of the power measurement; and

second providing means for providing the at least a portion of data to be transmitted from the base station with time characteristics proportional to the time reference by using the timing of the predefined portion of the idle period.

32. (Currently Amended) The ~~time-stamping mechanism~~apparatus of claim 27 further comprising second determining means for determining time characteristics of an idle period in a frame relative to the time reference;

second providing means for providing the frame with the time characteristics proportional to the time reference by using time characteristics of the idle period in the frame.

33. (Currently Amended) The ~~apparatus~~time-stamping mechanism of claim 27 further comprising emitting means for emitting the idle period from an antenna ~~unit~~ of the base station;

detecting means for detecting, in a mobile station, the idle period emitted from the antenna of the base station;

second determining means for determining the time of arrival of the idle period in the mobile station; and

positioning means for positioning the mobile station by using the time of arrival of the idle period.

34. (Currently Amended) The ~~time-stamping mechanism~~apparatus of claim 27 further comprising synchronizing means for synchronizing the transmission of the base station by using the time characteristics of the idle period relative to the time reference.

35. (Currently Amended) An apparatus ~~base station of a telecommunication system~~, comprising:

a time referencing signal ~~receiving-unit~~receiver configured to receive a time reference signal providing time reference in the telecommunication system;

an idle period generator configured to generate an idle period in the transmission of ~~at~~ the base station;

a ~~detecting-unit~~detector operationally connected to the idle period generator and the time reference signal ~~receiving-unit~~receiver, the ~~detecting-unit~~detector configured to determine time characteristic of the idle period relative to the time reference by means of a power measurement; and

a time ~~stamping-unit~~stamper operationally connected to the ~~detecting-unit~~detector and configured to provide at least a portion of data to be transmitted from the base station with the time characteristics proportional to the time reference by using the time characteristic of the idle period.

36. (Currently Amended) The method of claim 6, further comprising performing the power measurement of the idle period with a gauge located between the base band unit and the antenna ~~unit~~ of a base station.

37. (Currently Amended) The telecommunication system of claims 14, further comprising a gauge located between the base band unit and the antenna ~~unit~~ of a base station, wherein the gauge is configured to perform the power measurement on the idle period.

38. (Currently Amended) The ~~apparatus~~~~time-stamping mechanism~~ of claims 27, further comprising a gauge located between the base band unit and the antenna ~~unit~~ of a base station, wherein the gauge is configured to perform the power measurement on the idle period.

39. (Currently Amended) The ~~apparatus~~~~base station~~ of claims 35, further comprising a gauge located between the base band unit and the antenna ~~unit~~ of a base station, wherein the gauge is configured to perform the power measurement on the idle period.

40. (New) The apparatus of claim 35, further comprising:
an antenna operationally connected to the idle period generator configured to emit the idle period;
wherein the detector is configured to determine time characteristics of the idle period such that the uncertainty of the time interval between determining time characteristics of the idle period and emitting the idle period from the antenna of the base station is below a predetermined value.

41. (New) The apparatus of claim 35, further comprising:
an antenna operationally connected to the idle period generator configure to emit the idle period;

wherein the detector is configured to determine time characteristics of the idle period at a moment of emitting the idle period.

42. (New) The apparatus of claim 35, wherein the detector is configured to determine timing of a predefined portion of the idle period relative to the time reference by the power measurement; and

wherein the time stamper is configured to provide the at least a portion of data to be transmitted from the base station with time characteristics proportional to the time reference by using the timing of the predefined portion of the idle period.

43. (New) The apparatus of claim 35, wherein the detector is configured to determine the time characteristics of an idle period in a frame relative to time reference; and

wherein the time stamper is configured to provide the frame with the time characteristics proportional to the time reference by using time characteristics the idle period in the frame.

44. (New) The apparatus of claim 35, wherein the apparatus is configured to synchronize transmission of a base station by using time characteristics of the idle period relative to the time reference.